

NNN		NNN	MMM	MMM	LLL
NNN		NNN	MMM	MMM	LLL
NNN		NNN	MMM	MMM	LLL
NNN		NNN	MMMMMM	MMMMMM	LLL
NNN		NNN	MMMMMM	MMMMMM	LLL
NNN		NNN	MMMMMM	MMMMMM	LLL
NNNNNN		NNN	MMM	MMM	LLL
NNNNNN		NNN	MMM	MMM	LLL
NNNNNN		NNN	MMM	MMM	LLL
NNN	NNN	NNN	MMM	MMM	LLL
NNN	NNN	NNN	MMM	MMM	LLL
NNN	NNN	NNN	MMM	MMM	LLL
NNN	NNNNNN	NNN	MMM	MMM	LLL
NNN	NNNNNN	NNN	MMM	MMM	LLL
NNN	NNNNNN	NNN	MMM	MMM	LLL
NNN	NNN	NNN	MMM	MMM	LLL
NNN	NNN	NNN	MMM	MMM	LLL
NNN	NNN	NNN	MMM	MMM	LLL
NNN	NNN	NNN	MMM	MMM	LLLLLLLLLLLLLLLL
NNN	NNN	NNN	MMM	MMM	LLLLLLLLLLLLLLLL
NNN	NNN	NNN	MMM	MMM	LLLLLLLLLLLLLLLL

_S

Ps

NP

NP

SG

SO

NP

PA

_L

```

NN      NN  PPPPPPPP  AAAAAA  MM      MM  AAAAAA  CCCCCCCC
NN      NN  PPPPPPPP  AAAAAA  MM      MM  AAAAAA  CCCCCCCC
NN      NN  PP        PP  AA      AA  MMMM  MMMM  AA      AA  CC
NN      NN  PP        PP  AA      AA  MMMM  MMMM  AA      AA  CC
NNNN    NN  PP        PP  AA      AA  MM      MM  AA      AA  CC
NNNN    NN  PPPPPPPP  AA      AA  MM      MM  AA      AA  CC
NN      NN  PPPPPPPP  AA      AA  MM      MM  AA      AA  CC
NN      NN  PP        AA      AA  MM      MM  AAAAAA  CC
NN      NN  PP        AAAAAA  MM      MM  AAAAAA  CC
NN      NN  PP        AA      AA  MM      MM  AA      AA  CC
NN      NN  PP        AA      AA  MM      MM  AA      AA  CC
NN      NN  PP        AA      AA  MM      MM  AA      AA  CC
NN      NN  PP        AA      AA  MM      MM  AA      AA  CC

```

```

MM      MM  AAAAAA  RRRRRRRR
MM      MM  AAAAAA  RRRRRRRR
MMMM    MM  AA      AA  RR      RR
MMMM    MM  AA      AA  RR      RR
MM      MM  AA      AA  RR      RR
MM      MM  AA      AA  RRRRRRRR
MM      MM  AA      AA  RRRRRRRR
MM      MM  AAAAAA  RR      RR
MM      MM  AAAAAA  RR      RR
MM      MM  AA      AA  RR      RR
MM      MM  AA      AA  RR      RR
MM      MM  AA      AA  RR      RR
MM      MM  AA      AA  RR      RR

```

Version: 'V04-000'

COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.
ALL RIGHTS RESERVED.

THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED
ONLY IN ACCORDANCE WITH THE TERMS OF SUCH LICENSE AND WITH THE
INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR ANY OTHER
COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY
OTHER PERSON. NO TITLE TO AND OWNERSHIP OF THE SOFTWARE IS HEREBY
TRANSFERRED.

THE INFORMATION IN THIS SOFTWARE IS SUBJECT TO CHANGE WITHOUT NOTICE
AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY DIGITAL EQUIPMENT
CORPORATION.

DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS
SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.

MACRO NPADF\$

NPARSE function code definitions

NPAS_IMAGE = 0
NPAS_WORD = 1
NPAS_MASK = 2
NPAS_BYTE = 3
NPAS_EOM = 4
NPAS_NULL = 5
NPAS_SBEXP = 6
NPAS_ERROR = 7
NPAS_MATCH = 8
NPAS_LOOK = 9
NPAS_EXTZV = 10

NPARSE matching codes

NPAS_EXIT = 0 : Done
NPAS_FAIL = -1 : Fail the parse
NPAS_ADVANCE = 1 : Advance pointers

NPARSE flag bit definitions

NPASM_EXT = ^X01
NPASM_PARAM = ^X02
NPASM_ACTION = ^X04
NPASM_STATE = ^X08
NPASM_MASK = ^X10

```

      NPASM_MSKADR      = ^X20
      NPASM_OFFSET     = ^X40
      NPASM_LAST       = ^X8000
.ENDM
.MACRO  NPADFS
      MSGS STTBL,DEBUG
      .PSECT  NPASSTATE,NOWRT,NOEXE,BYTE
STTBL::
      .IF      IDENTICAL      <DEBUG>,<$DEBUG>
      .MACRO  DBGTPS
      .LIST
      .=
      .NLIST
      .ENDM
      .IF FALSE
      .MACRO  DBGTPS
      .ENDM
      .ENDC
      NPADFS
      FLG$$$ = -1
      NXT$$$ = 0
      .PSECT
      MSGS
      .MACRO  FIELDS,LABEL
      .PSECT  NPASSTATE
      FLG$$$ = FLG$$$!NPASM_LAST
      NTRANS
      .IF      NOT_BLANK      <LABEL>
      .ENDC
      FLG$$$ = -1
      .PSECT
      FIELDS
      NTRANS
      .PSECT  NPASSTATE
      .IF      EQUAL      FLG$$$+1
      FLG$$$ = 0
      .MEXIT
      .ENDC
      TYP$$$
      .WORD   FLG$$$
      .IF      NOT_EQUAL      FLG$$$&NPASM_EXT
      EXT$$$
      .ENDC
      .IF      NOT_EQUAL      FLG$$$&NPASM_PARAM
      PRM$$$
      .ENDC
      .IF      NOT_EQUAL      FLG$$$&NPASM_ACTION
      ACT$$$
      .ENDC
      .IF      NOT_EQUAL      FLG$$$&NPASM_MASK
      BIT$$$
      .ENDC
      .IF      NOT_EQUAL      FLG$$$&NPASM_STATE
      STAS$$
      .IF FALSE

```

```

      .IF      EQUAL    FLG$$$&NPASM_LAST
      .IF      EQUAL    NXT$$$
      .ERROR   ; BAD DEFAULT TRANSITION
      .ENDC
      .ENDC
      .ENDC
      FLG$$$ = 0
      NXT$$$ = 0
.ENDM
.MACRO ITRANS,LABEL,ACTION,MASK,ADDR,PARAM
      .IF      NOT BLANK    <PARAM>
      FLG$$$ = FLG$$$!NPASM_PARAM
      .MACRO PRM$$$
      .ADDRESS  PARAM
      .ENDM PRM$$$
      .ENDC
      .IF      NOT BLANK    <ACTION>
      FLG$$$ = FLG$$$!NPASM_ACTION
      .MACRO ACT$$$
      .ADDRESS  ACTION
      .ENDM ACT$$$
      .ENDC
      .IF      NOT BLANK    <MASK>
      FLG$$$ = FLG$$$!NPASM_MASK!NPASM_MSKADR
      .IF      BLANK    <ADDR>
      .ERROR   ; MASK ADDRESS NOT PRESENT
      .ENDC
      .MACRO BIT$$$
      .LONG    MASK
      .ADDRESS ADDR
      .ENDM BIT$$$
      .ENDC
      .IF      NOT BLANK    <LABEL>
      FLG$$$ = FLG$$$!NPASM_STATE
      .MACRO STAS$$
      .ADDRESS  LABEL
      .ENDM STAS$$
      .ENDC
.ENDM
.MACRO $IMAGE,SIZE,LABEL,ACTION,MASK,ADDR,PARAM
      .PSECT  NPAS$STATE
      NTRANS
      DBGTP$
      .MACRO TYP$$$
      .WORD   NPAS$ IMAGE
      .ENDM TYP$$$
      .MACRO EXT$$$
      .LONG   SIZE
      .ENDM EXT$$$
      FLG$$$ = FLG$$$!NPASM_EXT
      ITRANS LABEL,ACTION,MASK,ADDR,PARAM
      .PSECT
.ENDM
.MACRO $WORD,VALUE,LABEL,ACTION,MASK,ADDR,PARAM
      .PSECT  NPAS$STATE
      NTRANS

```

```
DBGTP$
.MACRO TYP$$$
.WORD NPAS WORD
.ENDM TYP$$$
.MACRO EXT$$$
.ADDRESS VALUE
.ENDM EXT$$$
FLG$$$ = FLG$$$!NPASM EXT
ITRANS LABEL,ACTION,MASK,ADDR,PARAM
.PSECT
.ENDM
.MACRO $WORD
$BYTE,VALUE,LABEL,ACTION,MASK,ADDR,PARAM
.PSECT NPAS$STATE
NTRANS
DBGTP$
.MACRO TYP$$$
.WORD NPAS BYTE
.ENDM TYP$$$
.MACRO EXT$$$
.ADDRESS VALUE
.ENDM EXT$$$
FLG$$$ = FLG$$$!NPASM EXT
ITRANS LABEL,ACTION,MASK,ADDR,PARAM
.PSECT
.ENDM
.MACRO $BYTE
$EOM,DUMMY,LABEL,ACTION,MASK,ADDR,PARAM
.PSECT NPAS$STATE
NTRANS
DBGTP$
.MACRO TYP$$$
.WORD NPAS EOM
.ENDM TYP$$$
ITRANS LABEL,ACTION,MASK,ADDR,PARAM
.PSECT
.ENDM
.MACRO $EOM
$MASK,BITMSK,LABEL,ACTION,MASK,ADDR,PARAM
.PSECT NPAS$STATE
NTRANS
DBGTP$
.MACRO TYP$$$
.WORD NPAS MASK
.ENDM TYP$$$
.MACRO EXT$$$
.LONG BITMSK
.ENDM EXT$$$
FLG$$$ = FLG$$$!NPASM EXT
ITRANS LABEL,ACTION,MASK,ADDR,PARAM
.PSECT
.ENDM
.MACRO $MASK
$SBEXP,RTN,LABEL,ACTION,MASK,ADDR,PARAM
.PSECT NPAS$STATE
NTRANS
DBGTP$
.MACRO TYP$$$
.WORD NPAS SBEXP
.ENDM TYP$$$
```

```

.MACRO EXT$$$
.ADDRESS      RTN
.ENDM
EXT$$$
FLG$$$ = FLG$$$!NPASM_EXT
ITRANS LABEL,ACTION,MASK,ADDR,PARAM
.PSECT
$SBEXP
.MACRO
$NULL,DUMMY LABEL,ACTION,MASK,ADDR,PARAM
.PSECT NPAS$STATE
NTRANS
DBGTP$
.MACRO TYP$$$
.WORD NPAS NULL
.ENDM TYP$$$
ITRANS LABEL,ACTION,MASK,ADDR,PARAM
.PSECT
$NULL
.MACRO $LOOK,VALUE LABEL,ACTION,MASK,ADDR,PARAM
.PSECT NPAS$STATE
NTRANS
DBGTP$
.MACRO TYP$$$
.WORD NPAS LOOK
.ENDM TYP$$$
.IF NOT BLANK <VALUE>
.MACRO EXT$$$
.LONG VALUE
.ENDM EXT$$$
FLG$$$ = FLG$$$!NPASM_EXT
.ENDC
ITRANS LABEL,ACTION,MASK,ADDR,PARAM
.PSECT
$LOOK
$EXTZV,FLD LABEL,ACTION,MASK,ADDR,PARAM
.PSECT NPAS$STATE
NTRANS
DBGTP$
.MACRO TYP$$$
.WORD NPAS EXTZV
.ENDM TYP$$$
LIST$ FLD
FLG$$$ = FLG$$$!NPASM_EXT
ITRANS LABEL,ACTION,MASK,ADDR,PARAM
.PSECT
$EXTZV
.MACRO
LIST$,VAL,POS,SIZ,FLG
.MACRO EXT$$$
.IF NOT BLANK VAL VAL
.BYTE VAL ; Field value
.IF FALSE
.ERROR ; $EXTZV - FIELD VALUE NOT SPECIFIED
.ENDC
.IF NOT BLANK POS POS
.BYTE POS ; Field position
.IF FALSE
.ERROR ; $EXTZV - FIELD POSITION NOT SPECIFIED

```

```

.ENDC
  .IF NOT_BLANK SIZ
  .BYTE SIZ ; Field size
  .IF FALSE
  .ERROR ; $EXTZV - FIELD SIZE NOT SPECIFIED
  .ENDC
  .IF NOT_BLANK FLG
  .BYTE FLG ; Flags
  .IF FALSE
  .BYTE 0 ; No flags
  .ENDC
  .ENDM EXT$$$
.ENDM
.MACRO $ERROR,ERR,LABEL,ACTION,MASK,ADDR,PARAM
  .PSECT NPASSTATE
  NTRANS
  DBGTP$
  .MACRO TYP$$$
  .WORD NPAS_ERROR
  .ENDM TYP$$$
  .MACRO EXT$$$
  .LONG ERR
  .ENDM EXT$$$
  FLG$$$ = FLG$$$!NPASM_EXT
  ITRANS NPAS_FAIL,ACTION,MASK,ADDR,PARAM
  .PSECT
$ERROR
  .ENDM
.MACRO $MATCH,NBR,LABEL,ACTION,MASK,ADDR,PARAM
  .PSECT NPASSTATE
  NTRANS
  DBGTP$
  .MACRO TYP$$$
  .WORD NPAS_MATCH
  .ENDM TYP$$$
  .MACRO EXT$$$
  .LONG NBR
  .ENDM EXT$$$
  FLG$$$ = FLG$$$!NPASM_EXT
  ITRANS LABEL,ACTION,MASK,ADDR,PARAM
  .PSECT
$MATCH
  .ENDM
.MACRO $NEXT
  .NEXT = -1
  NTRANS
  DBGTP$
  FLG$$$ = -1
  .ENDM
.MACRO $NEXT

```

0280 AH-BT13A-SE
VAX/VMS V4.0

DIGITAL EQUIPMENT CORPORATION
CONFIDENTIAL AND PROPRIETARY